

## Initial Analysis of Issues/Questions from Indicator Workshops (as of May, 2002)

The following list of issues and questions was developed from EPA staff-level workshops whose participants were asked to propose issues/questions that should be addressed in EPA's "State of the Environment Report". Following the workshops, Agency staff reviewed several, published public opinion surveys on environmental topics, and evaluated the list of issues/questions from the workshops -- identifying those that were of most interest to the public (as "public interested"). EPA also identified those issues/questions that Agency experts felt were important to address ("Agency should communicate"). "Pressure, State, or Effect" indicates whether the issue/question represents a "pressure" on an environmental or health condition; "state" describes an environmental or health condition or trend and, "effect" are the results or outcomes from "pressure" on an environmental condition or health factor.

<b>Issues</b>	<b>Questions</b>	<b>Public interested</b>	<b>Agency should communicate</b>	<b>Pressure, State, or Effect (PSE)</b>
<b>Theme: Human Health</b> <b>Issue:</b> <b>Trends for deceases in the United States</b>	<b>Question:</b> <b>What are the spatial and temporal trends for morbidity and mortality in the US</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
<b>Issue:</b> <b>Human exposure to environmental pollutants</b>	<b>Question:</b> <b>What are the temporal and spatial trends for environmental contaminants in humans (body burden)?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
<b>Issue:</b> <b>Diseases thought to be related to environmental pollution</b>	<b>Question:</b> <b>What is the environmental burden of disease?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects or State</b>

	<b>Question:</b> <b>What is the evidence for diseases that are related to environment?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects or State</b>
<b>Theme: Ecological Health</b>  <b>Issue</b> <b>Land Use and Land Cover</b>	<b>Question:</b> <b>What is the distribution and extent of land cover and land use in the US?</b>	<b>No</b>	<b>Yes</b>	<b>State</b>
<b>Issue</b> <b>Biological condition of the Nation</b>	<b>Question:</b> <b>What is the condition of biological resources in the US?* (wide scope and overlap)</b>	<b>No</b>	<b>Yes</b>	<b>State or Effects</b>
<b>Issue</b> <b>Pressures on biological condition</b>	<b>Question:</b> <b>How fragmented are natural resources?</b>	<b>No</b>	<b>Yes</b>	<b>Pressure or State</b>
	<b>Question:</b> <b>What are the major contaminants to which organisms are exposed?</b>	<b>No</b>	<b>Yes</b>	<b>Pressure</b>
<b>Issue</b> <b>Sustainable Ecological Resources</b>	<b>Question:</b> <b>What are measures of ecological sustainability?</b>	<b>No</b>	<b>Yes</b>	<b>State</b>
<b>Theme: Air</b>  <b>Issue</b> <b>Outdoor air-human health</b>	<b>Question:</b> <b>What is the quality/condition of the nation's air?</b>	<b>Yes</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> <b>What adverse human health effects do air pollutants cause?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>

	<b>Question:</b> Are some populations such as children, elderly, active, sick more susceptible to poor air quality?	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> What are the sources and/or causes of poor outdoor air quality?	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> How much air pollution comes from vehicles and equipment?	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> How much man-made radiation is in the air, and why should we be concerned?	<b>Yes</b>	<b>Yes</b>	<b>State and Effects</b>
<b>Issue</b> <b>Outdoor air--ecosystems</b>	<b>Question:</b> What is the status of conditions with regard to atmospheric impacts on ecosystems?	<b>Yes</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> What are the atmospheric impacts on ecosystems?	<b>Yes</b>	<b>Yes</b>	<b>State or Effects</b>
	<b>Question:</b> What are the sources and/or causes of poor outdoor air quality? (sources just for ecosystems)	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>

<b>Issue</b> <b>Indoor Air--Human Health</b>	<b>Question:</b> <b>What is the quality/condition of air inside buildings (e.g. homes, schools, workplaces)</b>	<b>Yes</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> <b>Are some populations such as children, elderly, active, sick more susceptible to poor air quality?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> <b>What are the aggregate and relative risks of "poor" indoor air quality?*</b> (risk)	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> <b>What are the sources and/or causes of poor indoor air quality?</b>	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> <b>What building characteristics and other factors contribute to poor air quality?</b>	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
<b>Issue</b> <b>Indoor/Outdoor Air--Quality of Life</b>	<b>Question:</b> <b>What are the impacts of air pollution of visibility in national parks and other protected lands?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> <b>What are the impacts of poor air quality on historical buildings and public works, works of art, and other culturally important venues?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>

	<b>Question:</b> <b>What are the impacts of increased UVB on quality of life?*</b> (quality of life vs health data)	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
<b>Theme: Land</b>  <b>Issue</b> <b>Land Cover/Land Use</b>	<b>Question:</b> <b>What is the extent/location of various land cover/habitat types?</b>	<b>No</b>	<b>Yes</b>	<b>State*</b> (links to land use/ land cover issue in ecosystems)
	<b>Question:</b> <b>What is the extent/location of various land uses and changes over time?</b>	<b>Yes *(urban sprawl)</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> <b>What is the distribution of human population and changes in that distribution over time?</b>	<b>Yes *(urban sprawl)</b>	<b>No</b>	<b>State</b>
<b>Issue</b> <b>Activities/Conditions that affect/impact/stress the landscape</b>	<b>Question:</b> <b>What are the sources and locations of urban stressors?</b>	<b>Yes *(urban sprawl)</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> <b>What are the sources and location of agricultural stressors?</b>	<b>No</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> <b>What are the sources and locations of extraction stressors?</b>	<b>No</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> <b>What are the sources and locations of "Other" (e.g. catastrophic) stressors?</b>	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>

<b>Issue</b> <b>Location and Condition of Degraded Lands</b>	<b>Question:</b> <b>What is the extent and location of contaminated land?</b>	<b>Yes</b>	<b>Yes</b>	<b>State or Pressure</b>
	<b>Question:</b> <b>What are the types and levels of land degradation?* (possibly combine this with issue 1)</b>	<b>No</b>	<b>Yes</b>	<b>State or Pressure</b>
	<b>Question:</b> <b>How do the types of land degradation affect humans, other species, and habitat? * (plain English please)</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> <b>How do contaminated lands impact other media?* (possible combine with question 3)</b>	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
<b>Issue</b> <b>Land Conservation/ Practice/Management</b>	<b>Question:</b> <b>How much land has been remediated (treatment/containment)?</b>	<b>Yes</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> <b>What are the health concerns associated with restoration?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> <b>How do Smart growth practices increase land efficiency?</b>	<b>Yes</b>	<b>Yes</b>	<b>Response</b>

	<b>Question:</b> <b>What are the health effects associated with Smart Growth?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
<b>Issue</b> <b>Cropping Practices *(rework into broader, possibly land management)</b>	<b>Question:</b> <b>How much land is in conservation tillage programs?*(possibly merge with 2)</b>	<b>No</b>	<b>Yes</b>	<b>State or Pressure</b>
	<b>Question:</b> <b>How much agricultural land is covered by best management practices for no-point sources? *(wording - Ag as NPS - current OW position)</b>	<b>No</b>	<b>Yes</b>	<b>State or Response</b>
	<b>Question:</b> <b>How much land uses water conservation? *(possibly merge w/2)</b>	<b>No</b>	<b>Yes</b>	<b>State or Response</b>
<b>Issue</b> <b>Waste Management</b>	<b>Question:</b> <b>How much solid waste and hazardous waste is minimized? *(rework question)</b>	<b>Yes</b>	<b>Yes</b>	<b>Response</b>
	<b>Question:</b> <b>How much hazardous waste is being recycled internally/on-site by industry?</b>	<b>Yes</b>	<b>Yes</b>	<b>Response</b>
<b>Issue</b> <b>Emergency Response and Preparedness</b>	<b>Question:</b> <b>How many spills of oil and hazardous material occur each year?</b>	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>

	<b>Question:</b> How much emergency response is conducted? *(reword question)	<b>Yes</b>	<b>Yes</b>	<b>Response</b>
<b>Issue</b> Integrated pesticide Management	<b>Question:</b> How much land (acres) is under IMP? *(merge with cropping practice, Q2)	<b>No</b>	<b>Yes</b>	<b>Response</b>
	<b>Question:</b> How many US acres are using "safe" pesticides?	<b>No</b>	<b>Yes</b>	<b>Response</b>
<b>Issue</b> Recycling	<b>Question:</b> How much hazardous and non-hazardous waste is being recycling? * merge w/ waste management, Q2	<b>Yes</b>	<b>Yes</b>	<b>Response</b>
	<b>Question:</b> What types of waste are being recycled? *merge w/ waste management, Q2	<b>No</b>	<b>Yes</b>	<b>Response</b>
<b>Theme: Global Change</b> <b>Issue 1 Climate Change</b>	<b>Question:</b> Is the climate changing?	<b>Yes</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> Can we attribute climate change to human influence?	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> What are human drivers of climate change? * (merge w/ Q2)	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>



	<b>Question:</b> <b>What are projections of climate change?</b>	<b>Yes</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> <b>What are the biological and physical effects of Climate Change?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> <b>What are impacts on human systems?</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> <b>How well are we adapting to climate change?</b>	<b>No</b>	<b>Yes</b>	<b>Response</b>
<b>Issue 2: Stratospheric Ozone</b>	<b>Question:</b> <b>What is the state of the hole in the ozone layer?</b>	<b>Yes</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> <b>Has the ozone layer changed over the US?</b>	<b>Yes</b>	<b>Yes</b>	<b>State</b>
	<b>Question:</b> <b>Are emissions of ODS increasing or decreasing</b>	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> <b>Are concentrations of ODS in the atmosphere decreasing?</b>	<b>Yes</b>	<b>Yes</b>	<b>State and Pressure</b>
	<b>Question:</b> <b>What are risks of UV radiation to me?</b> <b>* (reword risk to hazard)</b>	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>

	<b>Question:</b> What are the risks of UV radiation to the environment?	No	Yes	Effects
<b>Issue 3: Global ecosystem concerns</b>	<b>Question:</b> Which ecosystems are most vulnerable to global change?	No * (Rainforest yes)	Yes	Effect / State
	<b>Question:</b> What are the current and expected effects of global change on ecosystem processes on which humans depend?	No * (Rainforest yes)	Yes	Effects
	<b>Question:</b> How are or will key species being affected by global change?	No * (Rainforest yes)	Yes	Effects
	<b>Question:</b> What are the current and future threats to biodiversity? * (reword to align with indicators)	No * (Rainforest yes)	Yes	Pressure
	<b>Question:</b> What changes in ecosystem services affect important economic sectors such as agriculture, forestry and fisheries? * (consider adding eco-tourism and recreation)	No * (Rainforest yes)	Yes	Effects
<b>Theme: Water</b> <b>Issue 1: Safety of Drinking Water</b>	<b>Question:</b> What is the quality of our public water supply?	Yes	Yes	State

	<b>Question:</b> What is the quality of drinking water sources prior to treatment?	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> What is the quality of private wells?	<b>No</b>	<b>Yes</b>	<b>State</b>
<b>Issue 2: Safety of Consuming Food</b>	<b>Question:</b> Where do I need to worry about eating fish and shellfish?	<b>Yes</b>	<b>Yes</b>	<b>Effects</b>
	<b>Question:</b> How long do I need to “worry”? * (reword to clarify question)	<b>No</b>	<b>Yes</b>	<b>Effect</b>
	<b>Question:</b> What are the health effects of consuming contaminated fish and shellfish? * (added word contaminated)	<b>Yes</b>	<b>Yes</b>	<b>Effect</b>
	<b>Question:</b> What are the causes or sources of the contamination?	<b>Yes</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> Is the problem getting better or worse - trends?	<b>Yes</b>	<b>Yes</b>	<b>State</b>
<b>Issue 3: Recreation</b>	<b>Question:</b> Where is the water “safe” for recreation?	<b>Yes</b>	<b>Yes</b>	<b>Effect</b>

	<b>Question:</b> How long until the water is “safe” for recreation? * (reword or merge with Q1)	No	Yes	Effect
	<b>Question:</b> What are potential health effects of being in contaminated water?	Yes	Yes	Effect
	<b>Question:</b> What are the causes and sources of restricted recreation?	Yes	Yes	Pressure
	<b>Question:</b> Is the problem getting better or worse?	Yes	Yes	State
<b>Issue 4: Extent and Condition of Water Resource</b>	<b>Question:</b> Is the quantity of water increasing or decreasing?	Yes	No	State
	<b>Question:</b> Does water meet standards? * (reword)	Yes	Yes	State
<b>Issue 5: Extent and condition of living resources</b>	<b>Question:</b> Do we have healthy aquatic communities?	Yes	Yes	State
	<b>Question:</b> What is the extent and condition of aquatic- biodiversity? * (merge with Q1)	Yes	Yes	State

	<b>Question:</b> <b>Do the waters meet standards for biological integrity</b>	<b>No</b>	<b>Yes</b>	<b>Effect</b>
	<b>Question:</b> <b>What are the causes and sources of living resources' deficiencies?</b>	<b>No</b>	<b>Yes</b>	<b>Pressure</b>
	<b>Question:</b> <b>Are living resources improving or not?</b> * (reword)	<b>Yes</b>	<b>Yes</b>	<b>State</b>

<b>Questions Not Meeting Selection Criteria and Eliminated for Consideration in the State of the Environment Report</b>	<b>Questions</b>	<b>Public interested</b>	<b>Agency wants to communicate</b>	<b>Pressure, State, or Effect (PSE)</b>
Theme: Human Health  Issue: Human Health in the United States	Question How does the health of the US rank in respect to the rest of the world?	No	No	Effects
Theme: Ecological Health  Issue: Pressures on biological condition	Question What are the major habitat stressors to which organisms?	No	No	Pressure
Theme: Air  Issue: Indoor/Outdoor Air--Quality of Life	Question What is the value of having good visibility based on aesthetics and risk?	No	No	Effects
Theme: Air  Issue: Indoor/Outdoor Air--Quality of Life	Question What are the everyday operation and maintenance cost associated with cleaning and repair due to pollution damage?* (research based)	No	No	Effects
	Question What are the changes in property value associated with air pollution?	No	No	Effects
	Question What are the effects on quality of life associated with odors caused by increased air pollution?	No	No	Effects

	Question What are the impacts of air pollution (indoor/outdoor) on productivity?	No	No	Effects
Theme: Land  Issue: Land Cover/Land Use	Question What is the extent and distribution of tribal and federal lands?	No	No	State
Theme: Land Issue: Activities/Conditions that affect/impact/stress the landscape	Question What is the density and distribution of dams?	No	No	Pressure
Theme: Land Issue: Location and Condition of Degraded Lands	Question What are the causes of loss of productive agricultural land and the consequences?	No	Yes	Pressure
	Question What are the trends in losses (e.g. wetlands, soil, habitat)?* (difficult wording, question would be selected for wetlands and other relevant resources)	No	Yes	State or Pressure
Theme: Land Issue: Emergency Response and Preparedness	Question How well prepared are we to respond to emergencies? (Program measure is this within scope?)	Yes	Yes	Response

Theme: Land Issue: Integrated pesticide Management	Question How many farms (acres) are certified as organic?	No	No	Response
Theme: Global Change Issue 1 Climate Change	Question How does climate change relate to security? Biodiversity, trans boundary and other issues - what is its role in cumulative affects of other stressors?	No	No	Effects
Theme: Global Change Issue 3: Global ecosystem concerns	Question Are there cross-cutting indicators of ecosystem health that inform potential management responses? * (reword to put in scope, then select)	No	Yes	Response
Theme: Global Change Issue 4: <u>Transboundary</u>	Question How much air and water pollution is transported into the US from international sources?*( not in scope)	No	Yes	Pressure
	Question What are the impacts in U.S. habitats, food production, agriculture, ecological health and human health as the consequence of non-indigenous invasive species?	No	No	Effects



	<p>Question</p> <p>Are U.S. trade and international commerce practices responsible for increasing the burden of hazardous materials and invasive species that must be remediated within US borders? (*merge into Q1 and Q2) (not in scope)</p>	No	Yes	Response
	<p><b>Question</b></p> <p><b>To what extent is the U.S. externalizing its air pollution, water pollution, and hazardous waste burden to other countries? *(outside of scope of State of the Environment?) (Not in scope)</b></p>	No	Yes	Response
	<p><b>Question</b></p> <p><b>How successful has the United States been in meeting international air and water quality goals?* (not in scope)</b></p>	No	Yes	Response
<p>Theme: Global Change</p> <p>Issue 5: Environmental Security (defined as environmental conditions in other regions of the world that contribute to political and social instability which may ultimately lead to threats to US national interests, including national security, economic security, public health, and environmental quality)</p>	<p>Question</p> <p>What regions of the world are vulnerable to large rapid migrations of populations due to environmental conditions?</p>	No	No	State

	Question What regions of the world are subject to international conflict due to availability of natural resources (i.e. water, energy, land)?	No	No	State
	Question What percent of populations are living with poor environmental quality (e.g. access to clean water, clean air, and sanitation)	No	No	State
	Question What are the natural biological hazards in other parts of the world that pose a threat to U.S. public health? (E.g., Food borne pathogens, disease vectors, pests, viruses)	No	No	Pressure
Theme: Water Issue 4: Extent and Condition of Water Resource	Question Does the quantity of water support key habitats? * (reword)	No	No	State
	Question Is there sufficient water to support current and future populations?	No	No	State
	Question What are the causes of water deficiencies?	No	No	Pressure
	Question Is extent and condition getting better or worse? * (reword)	No	No	State

